In the Specification:

Please replace the paragraph beginning on page 1, line 8 with the following rewritten paragraph:

This application is related to prior provisional application serial no. 60/190,373 filed March 17, 2000. This application claims priority from that provisional application under 35 U.S.C. § 119(e).

Please replace the paragraph beginning on page 1, line 8 with the following rewritten paragraph:

A left-handed medium of the invention may include a continuous medium, or a fabricated element designed to give rise to a composite medium when all such units are considered as a collective medium. These elements may be fabricated by any of the many forms of machining, electroless- or electro-plating, direct write process, lithography, multi-media deposition build-up, self-organized assembly, and so forth. Examples of elements include, but are not limited to, a length of conducting wire, a wire with a loop (or loops) along its length, a coil of wire, or several wires or wires with loops. Further examples include those based on solenoidal resonators. A practical example of a solenoidal resonator is provided in I. S. Schelkunoff and H. T. Friis, Antennas: Theory and Practice, Ed. S. Sokolnikoff (John Wiley & Sons, New York, 1952). Further examples were recently introduced by Pendry et al. (IEEE Transactions on Microwave Theory and Techniques, Vol. 47, No. 11, pp. 2075-84, November 11, 1999), and include the "G" structure, double split ring resonators, Swiss roll structures, and planar spirals. FIG. 7 illustrates one exemplary Swiss roll structure where the dimension *d* is the gap distance between rolls. A planar spiral may be a 2-dimensional cross section along the axis of the Swiss roll structure of FIG. 7. FIG. 8 illustrates an additional exemplary periodic, planar spiral.

Please replace the replacement paragraph submitted in Amendment A beginning on page 21, line 2, with the following rewritten paragraph:

Here, ρ is the resistance per unit length of the rings measured around the circumference, ω is the frequency of incident radiation, ℓ is the distance between layers, r is the radial ~~the~~ dimension indicated in FIG. 2(a), a is the distance in the lattice from one ring to the next in the planar direction, F is the fractional area of the unit cell occupied by the interior of the split ring, Γ is the dissipation factor, and C is the capacitance associated with the gaps between the rings. The expressions for ω_0 and Γ can be found by comparing the terms in Equation 5. Since the Q-factor of an individual SRR used in the experiments was measured to be greater than 600. Thus, effects due to damping are relatively small.

Please replace the replacement equation (7) provided in Amendment A and beginning on page 24, line 22 of the specification with the new equation 7:

$$k^2 = \frac{(\omega^2 - \omega_p^2)}{c^2} \frac{(\omega^2 - \omega_{[[2]]f}^{\underline{2}})}{(\omega^2 - \omega_b^2)} \qquad (7)$$

Please replace the paragraph beginning on page 26, line 17 with the following rewritten paragraph:

Another exemplary geometry is shown in FIGS. 5(a) and 5(b). FIG. 5(b) shows a left-handed unit replicable in any direction to form a left hand medium of the invention having ~~a~~ left-handed propagation frequency bands for waves traveling in any direction in a plane perpendicular to the wires, operable over frequencies in the 8-12 GHz

band (or X-band). This geometry is a two-dimensional left-handed medium, having left-handed propagation bands that occur for only two directions of propagation. By utilizing three orthogonal sets of split rings and corresponding wires extending in all three dimensions, a three-dimensional left-handed medium can be formed. Each unit 20 in the medium is formed from a dielectric medium 22, e.g., fiberglass circuit board, with vertically arranged solenoidal resonators 24 (~~see~~ FIG. 5(a)) on a surface of the circuit board. Referring to FIG. 5(a), exemplary values for the dimensions shown are: width c = 0.25 mm, gap d = 0.3 mm, gap g = 0.46 mm, and length w = 2.62 mm. The resonators 24 are concentric and split, and are loosely referred to as split rings despite their rectangular shape. Conducting stripes 26 are formed on the reverse side of the circuit board, oriented so as to be centered with the split rings. Viewed from the perspective of a particular resonator in a unit, an individual wire is in line with the gaps of the resonators but in a plane behind the resonators.

Please replace the paragraph beginning on page 27, line 11 with the following rewritten paragraph:

The wires 26, which create negative permittivity, need not be electrically connected to that of the next unit. The effect of this is to create a propagation band that starts from zero frequency to a cut off, where a frequency band gap occurs that has negative permittivity. The frequency band gap corresponding to the split ring resonators is placed to overlap with this first gap to create a region of simultaneously negative permittivity and permeability. In the isotropic two-dimensional structure shown in FIG. 5(b), a left-handed propagation band occurs along the (1,0), (0,1) and (1,1) directions of incidence relative to the x, y, and z axis shown and where (1,0), (0,1) and (1,1) are notations of crystallogrpahic origin that specify the direction of vectors in the x, y plane. Experiments and simulations have shown overlapping transmission bands for the incident microwave radiation.